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Group Art Unit: 1772
Confirmation No.: 9479
Examiner: Nordmeyer, P.

Atty. Ref.: 2282-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Wen-Chen Su et al.
Appl. No. : 09/918,652
Filed : March 22, 2000
For : METHOD FOR FORMING MULTILAYER RELEASE LINERS AND
LINERS FORMED THEREBY

MS AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

This request is submitted with a Notice of Appeal and Form PTO/SB/33.

Independent claim 12 defines a pressure-sensitive label construction incorporating a multilayer release liner. Independent claim 21 defines the multilayer release liner. Release liners can be used with adhesive labels, such as mailing labels.

A typical label has an upper surface that can receive printed indicia, and a lower surface to which a pressure sensitive adhesive has been applied. The lower surface is removably attached to a release liner and then is securely attachable to an envelope or other surface. The release liner should hold the label in position during processing. The release liner also should permit the label to be removed easily without damaging the pressure sensitive adhesive on the rear of the label. A release liner typically includes a layer of silicone applied to a paper or film substrate.

The applicants have noted at least two problems with prior art release liners. First, the silicone layer may not be continuous across the release liner. This problem is likely when the silicone is applied to an uncoated paper because the silicone absorbs into pores of the paper. In this situation, the adhesive on the label will be held securely to areas of the substrate that are not covered by the silicone. As a result, the label may be difficult to separate from the release liner. Portions of the adhesive could separate from the label or portions of the substrate could remain affixed to the adhesive as the label is being removed. Either of these occurrences will reduce the effectiveness of the label by reducing the surface area of the usable adhesive on the label.

The second problem occurs when the silicone is held more securely to the label than to the substrate. In this situation, the silicone will delaminate from the substrate and will remain affixed to the label. Areas where the silicone remains affixed to the label cannot attach to an envelope or other such surface.

Cost, also is a very important concern. A product made with several discrete manufacturing steps often increases the manufacturing time and cost.

The applicants have determined that a very effective release liner includes a backing, a support layer on the backing and a release layer on the support layer. The release layer comprises silicone and is deposited on the support layer substantially when the support layer is deposited on the backing. Counsel understands that the timing of the deposition of the release layer and the support layer are method limitations and are not relevant to a product claim. However, the substantially simultaneous deposition results in a unique structure that is defined very clearly in the claims. In this regard, the substantially simultaneous deposition of the release layer and the support layer on the backing of claim 12 produces a release layer that is "dispersed into the

support layer to define an irregular interfacial area with small domains of silicone in the support layer". The "irregular interface between the release layer and the support layer decreases a propensity of the release layer to separate from the support layer." Virtually identical limitations are independent claim 21.

Prior to the assignment of Examiner Nordmeyer to this case, the claims were rejected in view of Reed. Reed discloses applying a silicone-containing coating to a precoated paper. Rule 132 Declarations were submitted to compare the claimed invention to Reed. The Declaration filed on April 1, 2005 clearly demonstrated that the claimed invention results in a nearly perfect anchorage of the release layer on the support layer. This nearly perfect anchorage was unexpected and better than Reed. The perfect anchorage of the release layer appears to be attributable the claimed dispersal of the release layer into the support layer to define an irregular interfacial area with small domains of the silicone in the support layer.

Examiner Nordmeyer understood the differences between the claimed invention and Reed, and withdraw the rejection based on Reed. However, a final rejection was issued in which both independent claims and several of the dependent claims were rejected as being anticipated by Knauf. The other claims were rejected as being obvious over Knauf considered in view of secondary references.

The final rejection stated that Knauf (col. 4, lines 56-58) teaches a release layer that "is deposited on the support layer substantially simultaneously when the support layer is deposited on the backing so that the release layer is dispersed into the support layer to define an irregular interfacial area with small domains of silicone in the support layer".

It is submitted that Knauf has been interpreted mistakenly. Knauf states that the “release base stock or carrier web is produced through a simple but unique multi-step line process. The paper substrate is coated through techniques such as extrusion coating” (col. 4, lines 56-59, emphasis added). Knauf explains that “further down the line, a protective sealing coating formulation, such as an acrylic latex polymer resin is applied as a liquid onto the uncoated underside of the paper and then dried. In this fashion, the unique release liner carrier web or base stock is formed” (col. 4, lines 60-64 emphasis added). Knauf proceeds to explain that the “release liner base stock is then coated on its upper polypropylene side with a silicone or the like type release agent.” (col. 4, lines 65-67, emphasis added).

The claimed structure with “an irregular interfacial area with small domain of silicone in the support layer” is seemingly impossible with the “multi-step line process” of Knauf where the Knauf protective coating or support layer is applied and “then dried” before the release layer of the Knauf is applied.

The final rejection states that col. 2, lines 32-36 of Knauf teach an irregular surface interface between the release layer and the support layer that decreases a propensity of the release layer to separate. However, that portion of Knauf merely lists the objectives of the Knauf disclosure. One such objective is “to provide a specialized coating that will not effect [sic] the peel strength property of the release layer.” It is submitted that this is an objective for all release liners. The issue is not what performance the reference would like to achieve, but rather what structure does Knauf teach to the person skilled in this art.

The multi-step process of Knauf where the substrate is coated, dried and then coated again with the silicone release agent could not produce the claimed irregular interfacial area with small domains of silicone in the support layer. Knauf is essentially the same as Reed where a release layer is applied to a previously coated substrate. Deficiencies of such a structure were considered in the Rule 132 Declaration that led to the withdrawal of the rejection based on Reed.

In view of the above, the rejection based on Knauf alone or with secondary references should be withdrawn and the claims should be allowed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gerald E. Hespos".

Gerald E. Hespos, Esq.

Atty. Reg. No. 30,066

Customer No. 001218

CASELLA & HESPOS LLP

274 Madison Avenue - Suite 1703

New York, NY 10016

Tel. (212) 725-2450

Fax (212) 725-2452

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